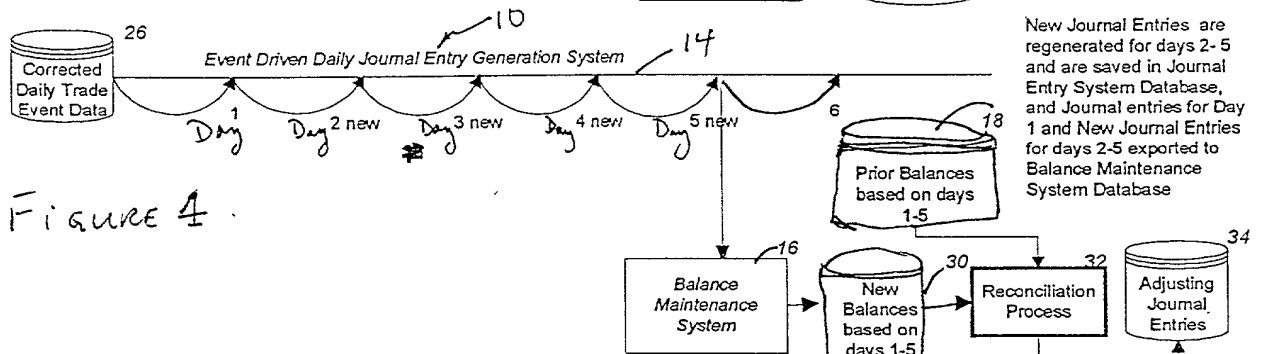
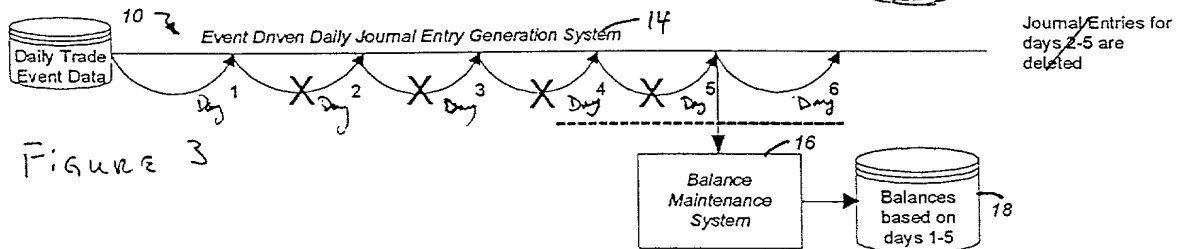
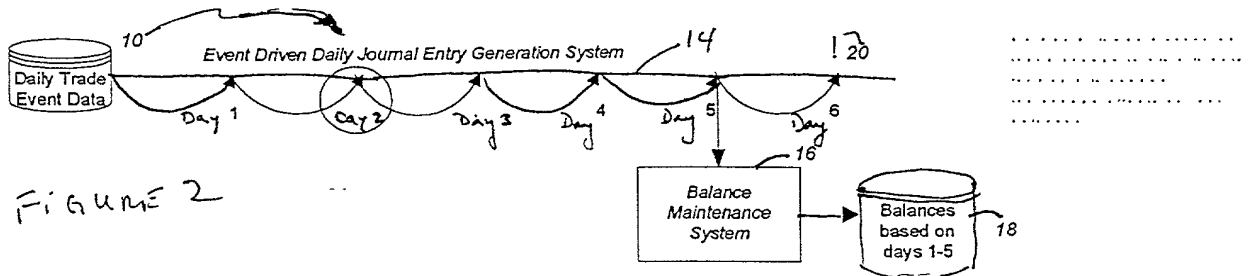
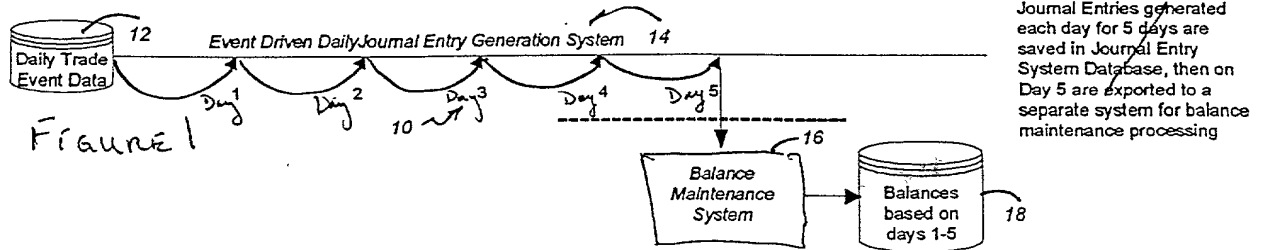
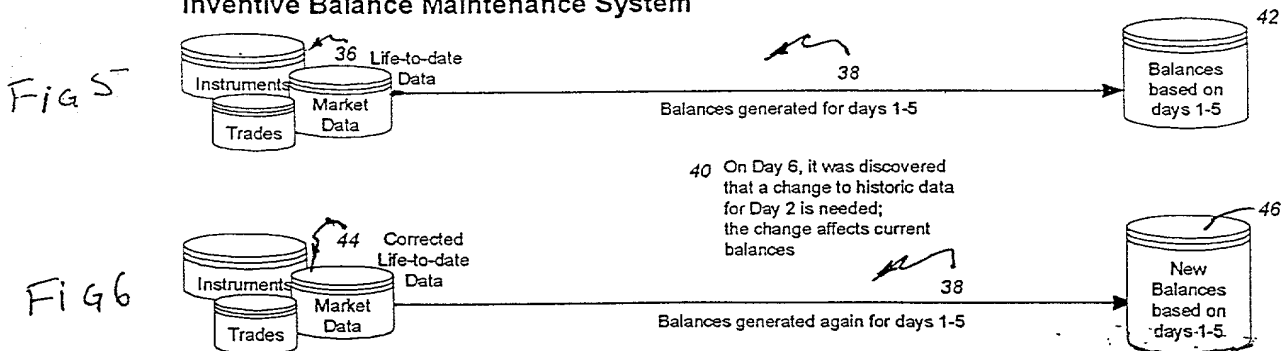


# Current State of the Art



## Inventive Balance Maintenance System



## FIGURE



090716 11501

PASds: Edit Meta Accounts			
Files Edit Report			
Meta Accounts			
Description			
ASSET	Cash	1	--> MarketValue:CF
ASSET	Cash:Interest	1	exp [(IPHF)-(PFI)]*(SI)-(IPHF)-(PFI):2 --> MarketValue:CF
ASSET	Cash:Principal	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> MarketValue:CF
ASSET	MarketValue	1	--> Expense:Interest
ASSET	MarketValue:SI	1	exp [(IPHF)-(PFI):2] --> Expense:Interest
ASSET	MarketValue:CF	1	if ((factor) -- 0) (Price) -- 1 (exp:future) (exp: (IPHF)-(PFI):2) --> Expense:Interest
ASSET	Pending	1	--> Expense:Interest
ASSET	Pending:CF	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> Expense:Interest
ASSET	Pending:Price	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> Expense:Interest
ASSET	Purch	1	--> MarketValue:CF
ASSET	Purch:Int	1	exp: - (SI)-(PFI):2 --> MarketValue:CF
ASSET	Purch:Prin	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> MarketValue:CF
INCOME	Income	1	--> Expense:Interest
INCOME	Income:CapGain	1	--> Expense:Interest
INCOME	Income:Interest	1	--> Expense:Interest
EXPENSE	Expense	1	--> Expense:Interest
EXPENSE	Expense:CapGain	1	--> Expense:Interest
EXPENSE	Expense:Interest	1	--> Expense:Interest
MEMO	Notional	1	--> Expense:Interest
MEMO	Notional:Settlement	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> Expense:Interest
MEMO	Notional:TradeDate	1	if ((exp:future) (exp: - (SI)-(PFI):2) ) else (exp: (IPHF)-(PFI):2 --> Expense:Interest

FIGURE 9

000007715-112501

PASs - Pending-AT Meta Account

Files Edit Update

Meta Account: AI

Summary Account? Trade Matching Global

Asset Liability Equity Income Expense Memo

Parent Meta Account: Pending

Acronym:

Short Description: Pending AI

Long Description: pending accrued interest

Synchronized? Style: Incremental Mask trade level detail?

Rule 78

VALIDATE

Functional Rule:

Offset Account: Purch Int

Outposting Account:

```
f ([bsEffectiveDate]==[SettleDate]) {  
  expr - ([TQ]-[SQ]) * ([AIF]+[PAF]) - [SQ] * ([PIS]-[IVIS])  
} else {  
  expr - ([TQ]-[SQ]) * ([AIF]+[PAF]) - [SQ] * ([PITF]-[IVITF])  
}
```

74

76

FIGURE 5/10

70

109211912660

**PAS SubLedger System II** [X] [Y] [Z]

File Edit Run Help

Master Account: PRINCIPAL\_38\_CNO

Effective Date: 09-Oct-2001

Mark Thread: 0

User Optis: [ ]

Internal Account: 231CP [X]

☐ Run in fast mode

Script

```
# Note delta here is just the change in value from AsOfDate to EffectiveDate
#
switch ([Attribute $A]) {
  Hedged {set HedgedDelta [expr ($HedgedDelta+([J]Balance
  Hedging {set HedgingDelta [expr ($HedgingDelta+([J]Balance
```

Stdout

tdout redirected to window...

Effective Date 09-Oct-2001

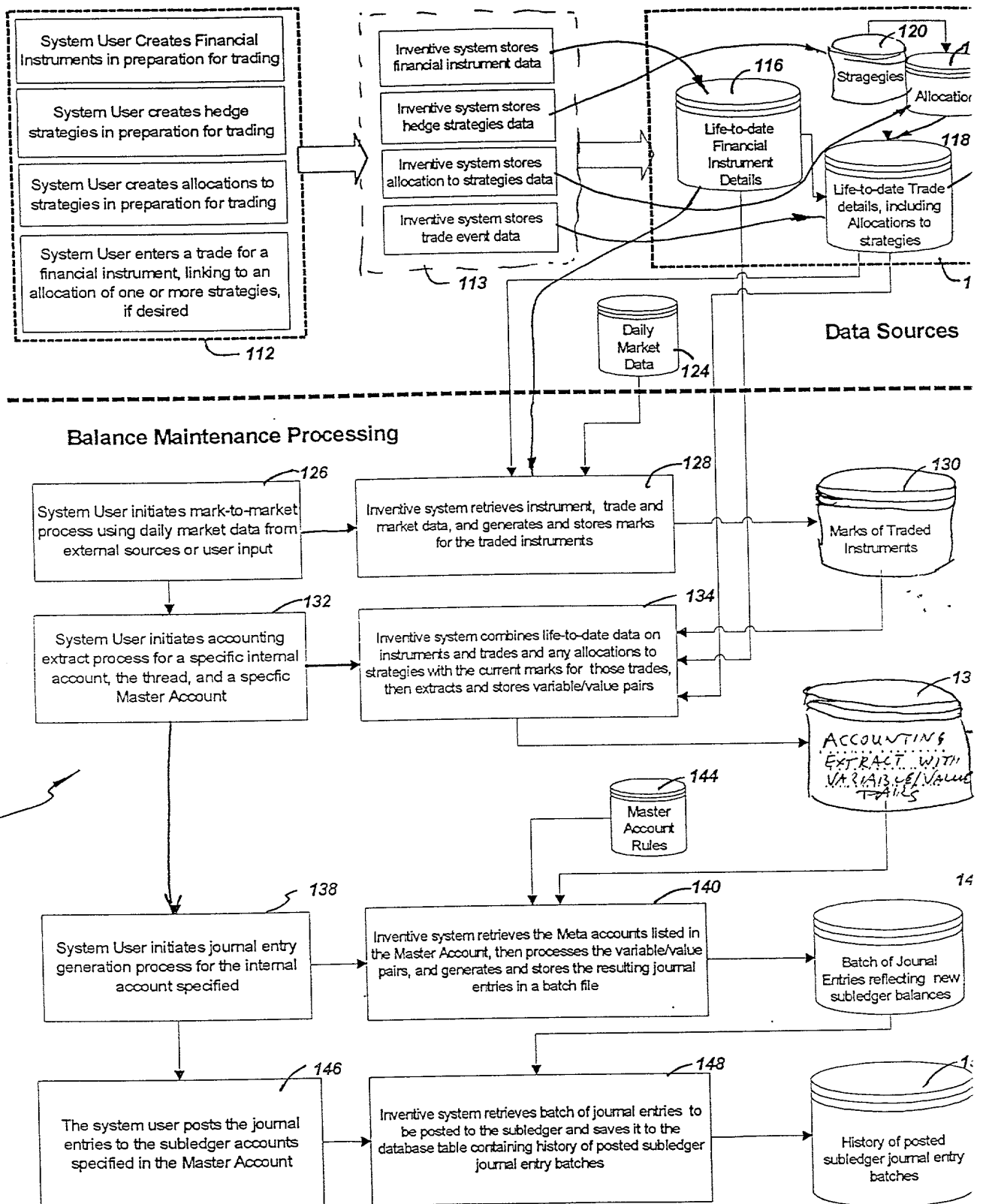
AsOfDate

----- Processing Strategy of Ledger\_53b238\_cLedger\_p is NONE -----

Stderr

stderr redirected to window...

FIGURE 8 //



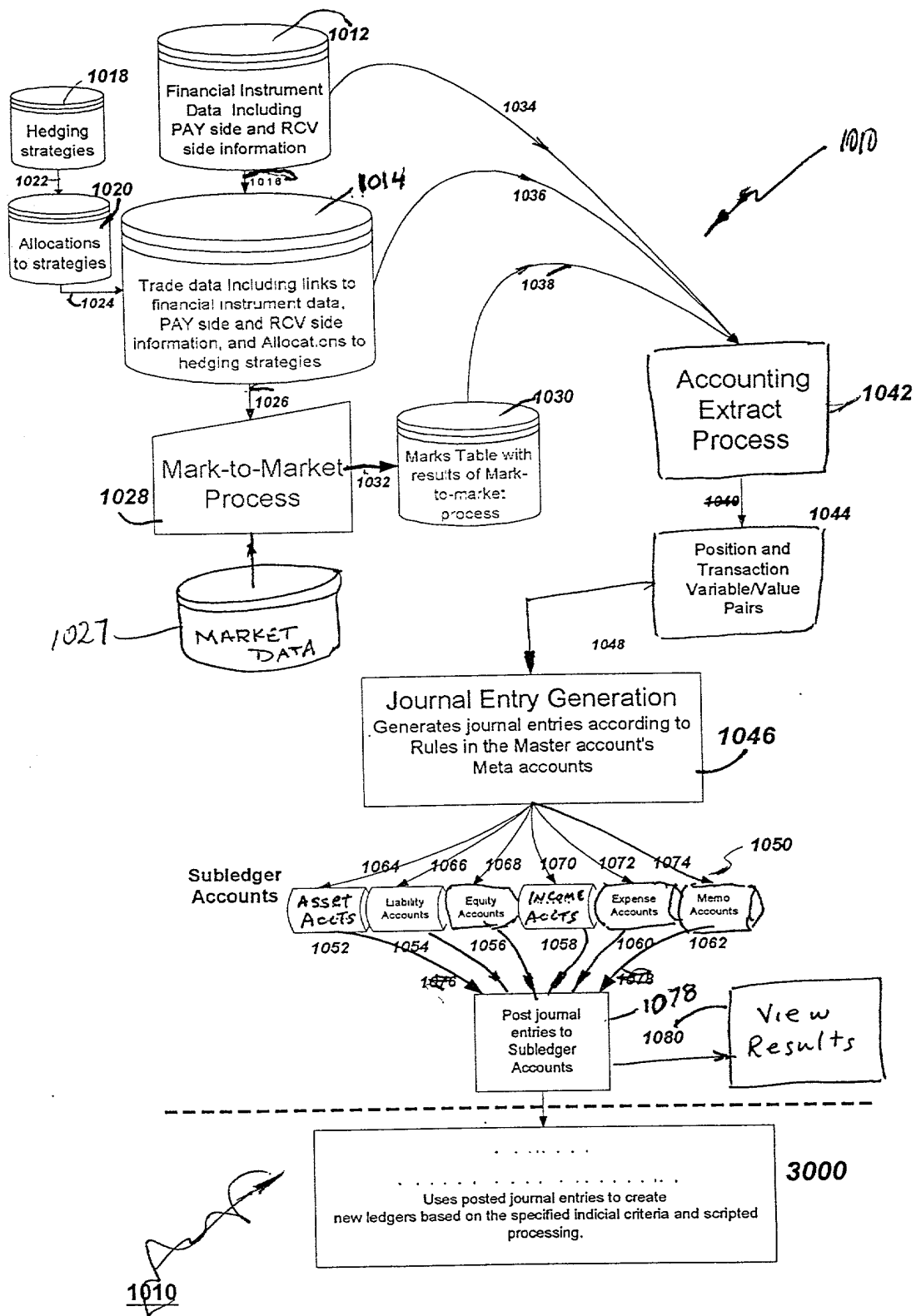


FIGURE 8/3

Determine  
Arguments and  
Conditional  
Parameters for  
Processing

Read jeGen  
arguments:  
ACCT, THREAD,  
DATE,  
FUNCTIONAL CCY

2012

Conditional parameters:

- "Process Only extracted Valuable?"
- /user/initialization file instructions

(we will reference these below)

1046

Partial ordering of  
the meta account  
for the specified  
Master Account

2014

Ordering is required for balance  
maintenance offsetting logic.  
Ordering is based on the offsets  
specified in the meta account.  
At this point, only a partial order  
can be set, since dynamic offsets  
are only known for certain at the  
transaction level.

Form  
Nominal  
Balance

Process Trade  
Events

2016

Journal entries created for the Summation and the  
cLedgerBalance selection are based on  
Master account/Meta account processing structure  
categorized by the indicial attributes of a journal  
entry.

CCY  
Internal Account  
Side  
Strategy  
Attribute  
Dealer  
Trade ID

Read next  
annotated trade  
event from the  
Accounting  
Extract. This  
information is  
taken from the  
Valuable and  
Trade information.

2018

The annotated trade events data uses the terms of the trade  
and the specifics of Valuable traded. These annotated trading  
events are broken out into position elements by bi-lateral  
positions and any allocated strategy percents. The number of  
position elements involved will dictate the number of journal  
entries to be created at the end of the process.

2010

A

AA

FIGURE 914



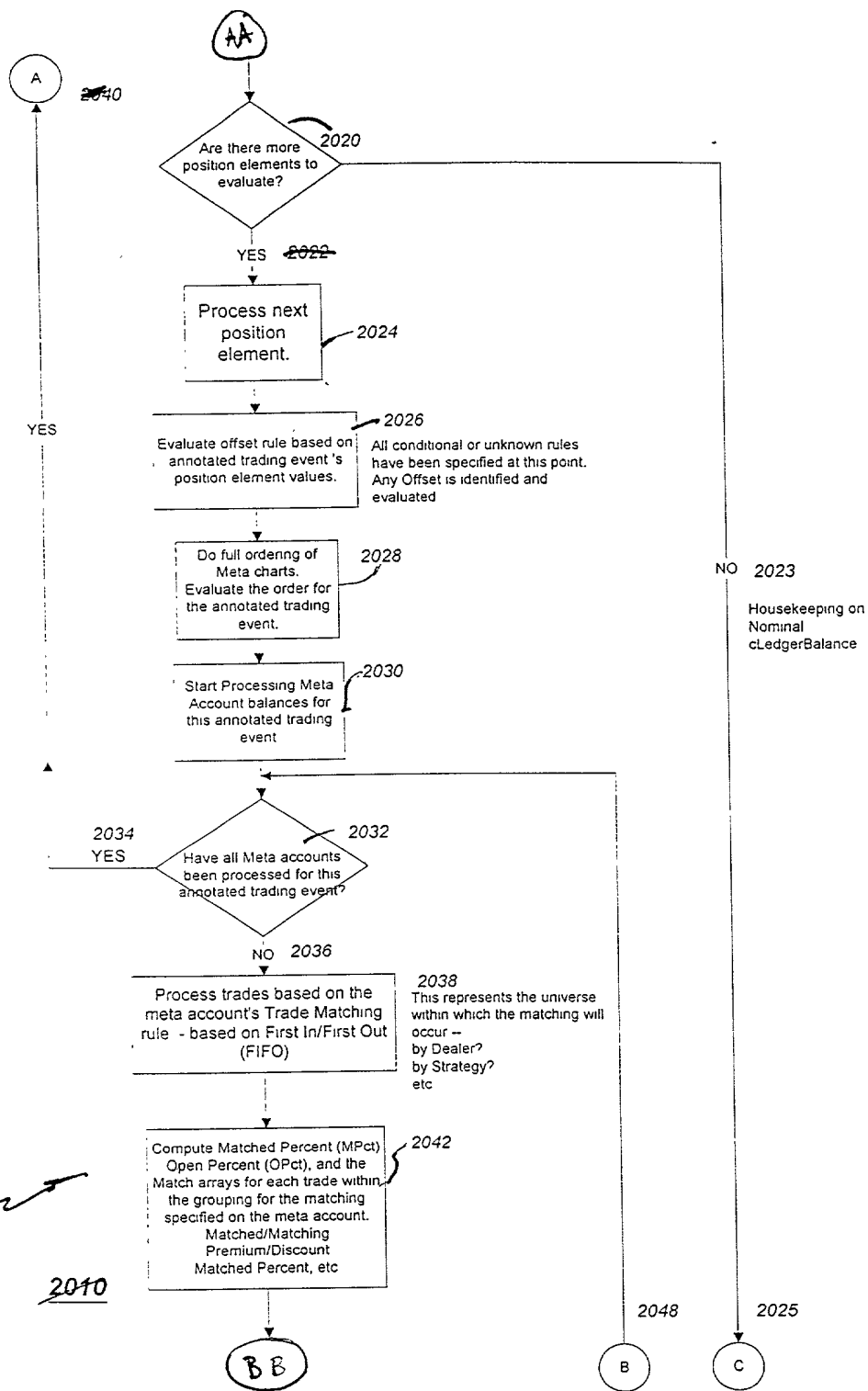
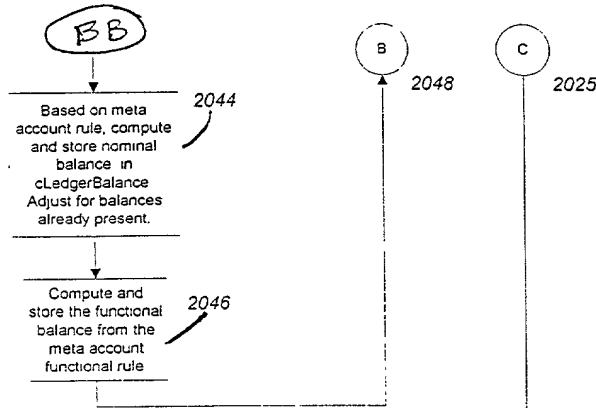


FIGURE 10<sup>15</sup>

Accumulate this nominal meta account balance in cLedgerBalance  
Accumulate the nominal offset meta account balance in the prior balance portion of cLedgerBalance

This process also forms a cLedgerBalance for non-synchronized accounts by accumulating offsets



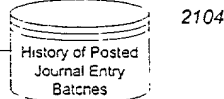
Compress Trade ID Level Details

Compress Trade ID level of detail on nominal cLedgerBalance for all meta accounts where the flag "Mask Trade Detail" is set to yes

Housekeeping on Nominal cLedgerBalance

Construct Historic Balances

Form Historic prior balances from Posted Batches



Only update balances on extracted instruments?

Select Entries from all posted Summary/PAS batches delimited by the instruments in extract being processed.

Brings in the right prior balances for consideration

Select entries from all posted Summary/PAS batches for the Thread and Account prior to the effective date.

Examine these historic prior balances using the indicial criteria.

Merge Historic and Nominal Balance Structures

Merge historic and nominal balance structures.

Using the matching algorithms based on the indicial criteria, merge the two sets of balances

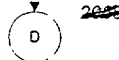


FIGURE 16

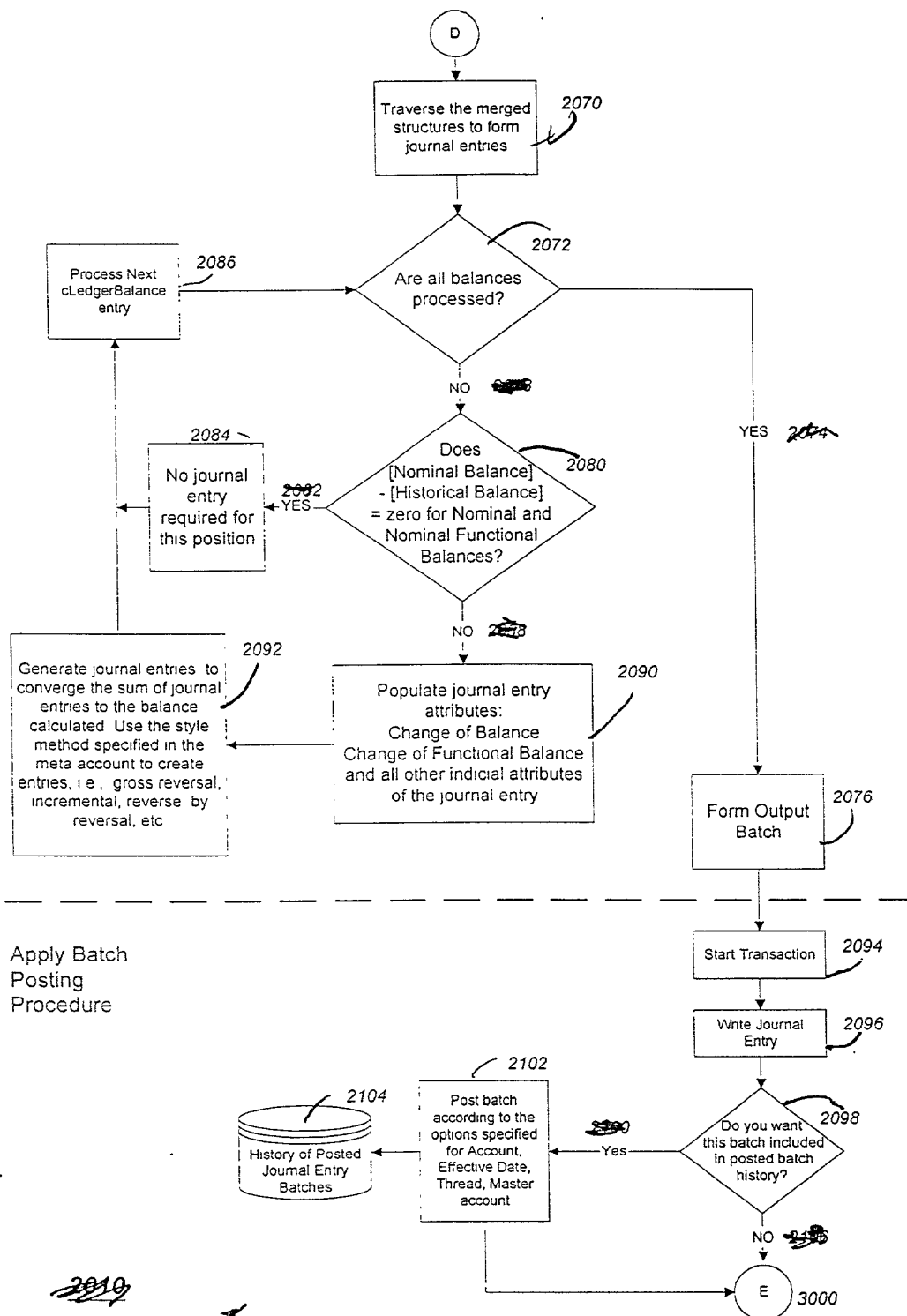


FIGURE 12 17

Optional  
Second Pass  
Processing

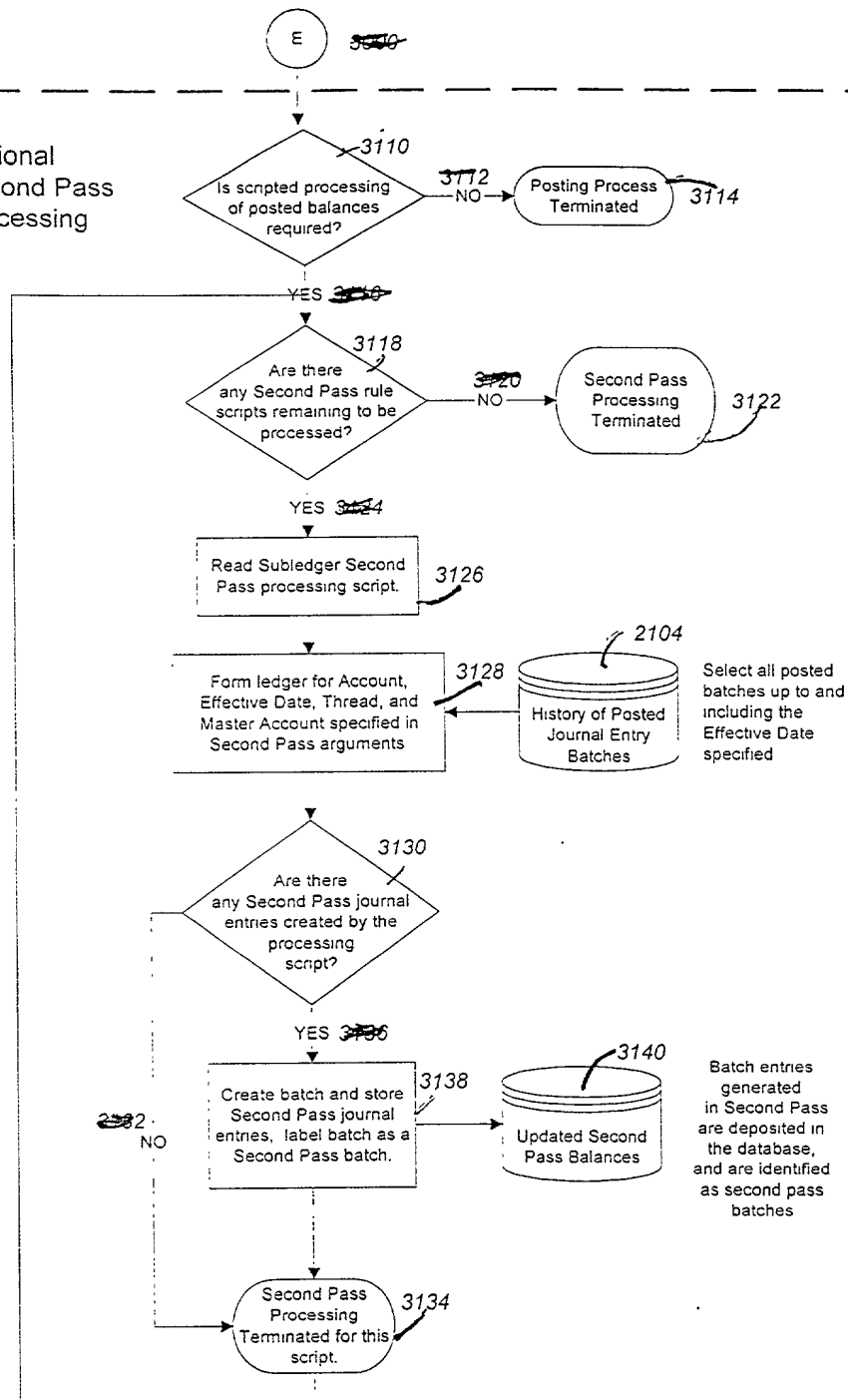


FIGURE 18